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Hiroaki Miyoshi

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EXAMINER

QURESHI, AFSAR M

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/760,584

**Applicant(s)**

MIYOSHI, HIROAKI

**Examiner**

Afsar M Qureshi

**Art Unit**

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2004.  
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 01 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☒ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/7/2004.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

***Response to Amendment***

1. Responsive to communication, dated October 7, 2004, Abstract has been amended as requested. However, the Examiner believes that “,” in line 13, after “...transmitted” should be removed.
2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because figure 3 is hand corrected. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

***The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.***

3. Claim 1 is rejected under 35 U.S.C. 102 (b) as being anticipated by U. S. Pat. No. 5,295,140 issued to Crisler et al (hereinafter ‘Crisler’).

Regarding claim 1, Crisler disclose a method for multi-purpose utilization of resources in a communication having TDM slot 240 in the inbound direction and TDM slot 250 in the outbound direction that are used for periodic communications between the base station 120 and communication units 101 (communication is periodically processing time band between communication terminals and the data bus control apparatus). See figures 1, 2B, and 2C, and col. 3, lines 41-43, and col. 4, lines 8-14. Furthermore, independently, the time slots in the inbound channel are subdivided, on a non-periodic basis, into two sub slots that may also be used by the communications units 101 (a non-periodical processing time band during which communication is non-periodically conducted

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between communication terminals and data bus control apparatus). See col. 4, lines 15-18. The base station uses a length indicator within a reservation packet to determine the size of a packet that a modem wishes to send (data transmission is conducted at a variable length packet unit during said non-periodical processing time band). See col. 6, lines 2-10.

4. Claims 2 - 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Pat. No. 5,295, 140 issued to Crisler et al (hereinafter Crisler) in view of U. S. Pat. No. 5,297,144 issued to Gilbert et al (hereinafter Gilbert).

Regarding claim 2, Crisler discloses the limitations discussed in claim 1 of having a periodical and a non-periodic processing time bands between the communication terminals and the data bus control apparatus are independently provided, and data transmission is conducted at a variable length packet unit during the non-periodical processing time band. Furthermore, it is disclosed that the TDM frame is time divided into TDM slots (see fig. 2A, and col. 5, lines 35-39).

However, Crisler does not disclose that there is a collection of communication requests (polling) during the non-periodical processing time band from the communication terminal.

Gilbert discloses a reservation-based polling protocol whereby a central station uses a two stages approach having a reservation stage and a polling stage. See col. 3, lines 26-41. Therefore, it would have been obvious to those having ordinary skill in the art, at the time of invention, to develop a method having a periodical and a non-periodic processing time bands between the communication terminals and the data bus control apparatus are independently provided, and data transmission is conducted at a variable length packet unit during the non-periodical processing time band, and a collection of communication requests (polling) during the non-periodical processing time band from the communication terminal is time divisionally conducted for a key reason. By providing a periodical band, a communication terminal will have at least a dedicated bandwidth for transmission of its data.

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By having a non-periodical band in which polling is used will give a communication terminal additional bandwidth for transmission of its data. As a result of combining these two bands, the need of increasing utilization of communication resources can be achieved as taught by Crisler. See col. 3, lines 6-13.

Regarding claims 3, 4 and 5, in addition to limitations disclosed in claims 1 and 2 discussed earlier, Gilbert further discloses the communication unit (communication terminals) sends its reservation request RR with a particular priority set in the control field of its reservation request during the reservation request period. The base station polls the active stations according to the priority in the reservation request and schedules data transmission during the polled data transfer period (Conducting communication with priority during each non-periodical processing time band are previously determined and a schedule is made out; claims 3 and 4. Conducting communication with priority do not exist, the non-periodical time band is allocated to communication with other communication terminals; claim 5). See fig. 3, and col. 8, lines 39-49.

Regarding claim 6, in addition to limitations, in claim 1, discussed earlier, Gilbert further discloses the length of data packet in bytes is specified in the Length LGN 30 field. Hence, on the average, the communication request is related to LGN (communication requests from the communication terminals are averaged by a time period during which transmission of a plurality of packets is conducted). See col. 6, lines 34-36.

### ***Allowable Subject Matter***

5. Claims 7-13 are allowed over the prior art of art of record.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record, as cited, fails to disclose the method steps of “transmitting data content which is averaged by a time period and is below or equal to allocated allowable band, and, suppressing transmission if it is above or equal to the allowable band (claims 7 and 11)”.

### ***Response to Arguments***

6. Applicant's arguments filed on October 7, 2004 in respect to claims 1-6 have been fully considered but they are not persuasive.

Claims 1-6. Applicant argued that the cited prior art references fail to disclose the specific feature “ *the non-periodic communication relates to communication that occurs between one of the plurality of communication terminals and the data bus control apparatus at a time other than the periodic time.*”

The Examiner maintains that this feature is not supported by the Specification (see page 4, line 14 in paragraph [0012] of Specification). The limitation “independently provided”, as in claim 1 is broader and does not convey the specific meanings as above underlined explanation. The Examiner contends that all the limitations in claim 1 are anticipated by the cited reference, Crisler (US 5,295,140) and of subsequent claims 2-6 in view of Gilbert et al. (US 5,297,144).

Claims 7-13. No specific arguments were presented, by the Applicant, in reference to the rejection of claims 7-13. However, upon a careful revision of the prior art, and further search, the Examiner believes claims 7-13 are allowable over the prior art of record for the reasons specified in “Allowable Subject Matter” above.


7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Afsar M Qureshi whose telephone number is (571) 272 3178. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272 3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AFSAR QURESHI  
PRIMARY EXAMINER

April 11, 2005